REMARKS

The Office action of July 5, 2007, has been carefully considered.

Claim 14 has been amended to recite that the ends of the flexible elongated element are connected to the first and second objects, respectively, and to recite that the first object is located relative to the second object. Support for these amendments can be found throughout the specification and drawings, for example at page 8, lines 19-22, and in Figure 1.

Claims 14, 18 and 19 have been rejected under 35 USC 102(b) as anticipated by Hodac.

Hodac teaches placement of a plurality of segments on the walls of a tunnel. The segments are each formed by two orthogonal plates, a base plate and a side plate, forming an L-shaped cross section. A base plate of a segment is fixed to the wall of the tunnel and is hinged to a baseplate of an adjacent segment. Then, the relative rotation of the segments at the hinge is measured by a measurement of a linear elongation of a sensor placed between the two side plates of two adjacent segments.

Hodac does not disclose a flexible elongated element, or the two objects at the respective ends of the flexible elongated element.

It is not clear how the structure of Hodac may be read onto the invention. If the couple of segments are considered to be a flexible elongated element, it measures a concentrated rotation at the hinge between the two base plates and there are no objects at the ends of the train of segments. If the whole train of segments is considered to be a flexible elongated element, the relative rotation of the two ends of the train of segments is unknown, since the single rotations are not relevant for measuring deformation of a structure.

Moreover, there also are no objects at the end of the train of segments.

Withdrawal of this rejection is requested.

Claims 14, 15 and 19 have been rejected under 35 USC 102(b) as anticipated by Challis, while Claims 16, 17 and 18 have been rejected under 35 USC 103(a) as obvious over Challis.

Challis teaches an angular measurement device having a coil spring arranged about a sleeve having an axial bore in which a fiber is placed. When the device is bent, the coils on the side of the bend pack together and the fiber elongates. The elongation is proportional to the angle of bending.

The principle of Challis is different from the claimed invention. First, if the coil spring were not present, the axial fiber would not elongate because during the deformation is on the neutral axis. Therefore, if the sleeve is considered to be the flexible elongated element, it is on the neutral axis, and the coil spring is a means for causing the neutral axis to elongate during the bending. The technical effect is therefore different, even if the result is the same.

However, the structure disclosed by Challis has a fundamental disadvantage. Since the fiber is on the neutral axis of the sleeve, the fiber elongates regardless of the sign of the bending. For that reason, the device of Challis cannot be used to detect changes of the bending sign, and cannot be used when the bending bridges the zero point, since it would be impossible to detect on which side bending has occurred.

According to the present claims, the fiber is placed at a distance from the neutral axis, allowing the fiber to elongate when the bending is at the opposite side from the neutral axis, and to shorten when the bending is on the same side as the neutral axis.

This is a substantial advantage of the invention as compared with Challis, and withdrawal of this rejection is requested.

Withdrawal of the prior rejections over Slocum and Danisch is acknowledged.

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,

Ira J. Schultz
Registration No. 28666
Attorney for Applicants
(703)837-9600, ext. 23